

IN THE SPECIFICATION:

Please replace the paragraph beginning on Page 15, line 5, with the following:

Q1 In a case where the recording material has a cyanine dye as the IR absorber, it is desirable that optical density at an absorption peak in the IR range falls between 0.1 and 3.0. If the optical density exceeds this range, the sensitivity of the recording material will be low. The optical density is determined based on the amount of the IR absorber in the recording material and the thickness of the recording layer of the material. Therefore, a desired optical density may be attained by controlling these two conditions. The optical density of the recording layer may be measured in any ordinary manner. For example, the recording material of which the optical density is to be measured is applied to a transparent or white support to form thereon a recording layer whose dry thickness is within the range necessary for lithographic printing plates, and the transmittance of the recording layer is measured with a transmission densitometer; or the recording material is applied to a reflective support of, for example, ~~aluminium~~ aluminum to form a recording layer thereon, and the reflection density of this layer is measured.

Please replace the paragraph beginning on Page 22, line 4, with the following:

Q2 Additionally, ~~Onium~~ onium salts described in paragraphs [0030] to [0037] in Japanese Patent Application No. 2000-184603 are also preferably used in the present invention.

Please replace the paragraph beginning on Page 47, line 6, with the following:

Q3
Preferably, a small amount of a thermal polymerization inhibitor is added to the image-recording material for preventing unnecessary thermal polymerization of the radical-polymerizable, ethylenically unsaturated double bond-having compound in the material while the material is being produced or stored. Examples of the thermal polymerization inhibitor are hydroquinone, p-methoxyphenol, di-t-butyl-p-cresol, pyrogallol, t-butylcatechol, benzoquinone, 4,4'-thiobis(3-methyl-6-t-butylphenol), 2,2'-methylenebis(4-methyl-6-t-butylphenol), and N-nitroso-N-phenylhydroxylamine ~~aluminium~~ aluminum salt and the like. Preferably, the amount of the thermal polymerization inhibitor in the material falls between about 0.01 % by weight and about 5 % by weight of the material. If desired, a higher fatty acid or derivative thereof, such as behenic acid or behenic acid amide, having the ability to prevent polymerization retardation by oxygen may be added to the recording material. In a step of drying the material after coating on a support, the acid or acid derivative added to the material may be localized in the surface of the photosensitive layer of the material formed on the support. Preferably, the amount of the higher fatty acid or derivative in the recording material falls between about 0.1 % by weight and about 10 % by weight of the material.

Please replace the paragraph bridging pages 48 and 49, with the following:

a4
In general, the above-mentioned components of the image-recording material of the present invention are dissolved in a solvent and applied to a suitable support. The solvent includes, for example, ethylene dichloride, cyclohexanone, methyl ethyl ketone, methanol,

a4
ethanol, propanol, ethylene glycol monomethyl ether, 1-methoxy-2-propanol, 2-methoxyethyl acetate, 1-methoxy-2-propyl acetate, dimethoxyethane, methyl lactate, ethyl lactate, N,N-dimethylacetamide, N,N-dimethylformamide, tetramethylurea, N-methylpyrrolidone, dimethylsulfoxide, ~~sulforane~~ sulfolane, g-butyrolactone, toluene, water or the like, but is not limited thereto. These solvents may be used singly or combined. Preferably, the concentration of the constituent components (in terms of total solid content including additives) in the solvent falls between 1 and 50 % by weight.

Please replace the paragraph beginning on Page 53, line 12, with the following:

a5
One example of a support to which the image-recording material of the present invention may be applied is a tabular support having good dimensional stability, for example, paper, paper laminated with a plastic material (e.g., polyethylene, polypropylene or polystyrene), metal sheets (of, for example, ~~aluminium~~ aluminum, zinc or copper), plastic films (of, for example, cellulose diacetate, cellulose triacetate, cellulose propionate, cellulose butyrate, cellulose acetate butyrate, cellulose nitrate, polyethylene terephthalate, polyethylene, polystyrene, polypropylene, polycarbonate, or polyvinyl acetal), or paper or plastic films coated with metal, such as the metals mentioned above, through lamination or deposition.

Please replace the paragraph bridging Pages 53 and 54, with the following:

a6
As the support of the image-forming material of the present invention, preferred are polyester films and ~~aluminium~~ aluminum sheets. Above all, especially preferred are

96 ~~aluminium~~ aluminum sheets, due to having good dimensional stability and being relatively inexpensive. Preferably, the ~~aluminium~~ aluminum sheet is a pure ~~aluminium~~ aluminum sheet or an ~~aluminium~~ aluminum alloy consisting mainly of ~~aluminium~~ aluminum and containing traces of hetero elements. ~~Aluminium~~ aluminum-laminated or deposited plastic films are also usable herein. The hetero elements in the ~~aluminium~~ aluminum alloy include, for example, silicon, iron, manganese, copper, magnesium, chromium, zinc, bismuth, nickel and titanium. The hetero element content of the ~~aluminium~~ aluminum alloy is at most 10 % by weight. Especially preferred for use in the present invention are pure ~~aluminium~~ aluminum sheets. However, completely pure ~~aluminium~~ aluminum is difficult to prepare with an ordinary smelting technique. Therefore, the pure ~~aluminium~~ aluminum for use herein may contain traces of hetero elements. The ~~aluminium~~ aluminum sheets for use in the present invention are not specifically defined with regard to composition, and any known ~~aluminium~~ aluminum sheets which have been used in the art may be used in the present invention. The thickness of the ~~aluminium~~ aluminum sheet may be from 0.1 mm to 0.6 mm or so, preferably between 0.15 mm and 0.4 mm, and more preferably between 0.2 mm and 0.3 mm.

Please replace the beginning on Page 54, line 17, with the following:

97 Prior to roughening, if desired, the surface of the ~~aluminium~~ aluminum sheet may be degreased, for example, by treatment with a surfactant, an organic solvent or an aqueous alkali solution, for removing rolling oil.

Please replace the paragraph bridging pages 54 and 55, with the following:

AS
The surface of the ~~aluminium~~ aluminum sheet may be roughened by various methods. For example, it may be mechanically roughened, or may be roughened through electrochemical surface dissolution or through selective chemical dissolution. For mechanical roughening, any known method is employable. For example, the surface of the ~~aluminium~~ aluminum sheet may be roughened by ball grinding, brushing, blasting, or buffing. For electrochemical roughening, for example, the ~~aluminium~~ aluminum sheet may be processed in an electrolytic solution of hydrochloric acid or nitric acid with a direct current or an alternating current being applied. These two methods may be combined, as in JP-A No. 54-63902.

Please replace the paragraph beginning on Page 55, line 5, with the following:

AG
If desired, the thus-roughened ~~aluminium~~ aluminum sheet may be etched with alkali and neutralized, and then optionally subjected to anodic oxidation for further enhancing water retentiveness and abrasion resistance of the surface. For anodic oxidation of the ~~aluminium~~ aluminum sheet, employable are various types of electrolytes capable of forming porous oxide films. Generally employed is sulfuric acid, phosphoric acid, oxalic acid, chromic acid or a mixture thereof. The concentration of the electrolyte for anoxic oxidation may be determined depending on the type of the electrolyte used.

Please replace the paragraph beginning on Page 56, line 1, with the following:

After having been subjected to anodic oxidation, the surface of the ~~aluminium~~ aluminum sheet is optionally hydrophilicated. For hydrophilication, employable is, for example, a method of processing the ~~aluminium~~ aluminum sheet with an alkali metal silicate (e.g., aqueous sodium silicate solution), as in USP 2,714,066, 3,181,461, 3,280,734 and 3,902,734. In this method, the support is dipped in an aqueous sodium silicate solution or is electrolyzed in the solution. Apart from this method, also employable is a method of processing the ~~aluminium~~ aluminum sheet with potassium fluorozirconate, as in JP-B No. 36-22063; or a method of processing with polyvinylphosphonic acid, as in USP 3,276,868, 4,153,461 and 4,689,272.

Please replace the paragraph bridging Pages 63 and 64, with the following:

A melt of JIS Al050 alloy of at least 99.5 % Al, containing 0.30 % Fe, 0.10 % Si, 0.02 % Ti and 0.013 % Cu was purified and cast. For purifying, the alloy melt was degassed to remove unnecessary gas such as hydrogen therefrom, and filtered through a ceramic tube filter. The alloy melt was cast by DC casting. A solidified ingot having a thickness of 500 mm was cut to a depth of 10 mm from the surface, and then homogenized at 550°C for 10 hours to prevent intermetallic compounds therein from growing into coarse grains. Next, this was hot-rolled at 400°C, then annealed in a continuous annealing furnace at 500°C for 60 seconds (process annealing), and thereafter cold-rolled into an ~~aluminium~~ aluminum sheet having a thickness of 0.30 mm. Here, the surface roughness of the roll was controlled such that the center line average height, Ra, of the cold-rolled

Q11 ~~aluminium~~ aluminum sheet would be 0.2 μm . The ~~aluminium~~ aluminum sheet was leveled with a tension leveler to thereby further increase surface smoothness.

Please replace the paragraph beginning on Page 64, line 13, with the following:

Q12 Next, the ~~aluminium~~ aluminum sheet was subjected to surface treatment in the manner mentioned below, so that it could be a support of a lithographic printing plate.

Please replace the paragraph beginning on Page 64, line 16, with the following:

Q13 Specifically, for removing rolling oil from the surface, the ~~aluminium~~ aluminum sheet was degreased with an aqueous 10 % sodium aluminate solution at 50°C for 30 seconds, then neutralized with aqueous 30 % sulfuric acid at 50°C for 30 seconds, and then desmuted.

Please replace the paragraph bridging pages 64 and 65, with the following:

Q14 Next, the surface of the ~~aluminium~~ aluminum sheet was electrolytically dressed and roughened. This was for improving the adhesiveness between the ~~aluminium~~ aluminum sheet serving as the support and a photosensitive layer to be formed thereon, and for ensuring water retentiveness of a non-image area of a printing plate having the ~~aluminium~~ aluminum sheet as a support. Specifically, an aqueous solution containing 1 % nitric acid and 0.5 % ~~aluminium~~ aluminum nitrate was prepared and kept at 45°C, and a web of the ~~aluminium~~ aluminum sheet was passed therethrough while applying an alternating electric current (duty ratio: 1/1) to the solution from an indirect electric cell. The current density

a14
was 20 A/dm²; and the electric power to the anode was 240 C/dm². After having been thus dressed, the ~~aluminium~~ aluminum sheet web was etched in an aqueous 10 % sodium aluminate solution at 50°C for 30 seconds, then neutralized in an aqueous 30 % sulfuric acid solution at 50°C for 30 seconds, and thereafter desmuted.

Please replace the paragraph beginning on Page 65, line 9, with the following:

a15
For improving abrasion resistance, chemical resistance and water retentiveness, the ~~aluminium~~ aluminum sheet web was subjected to anodic oxidation to form an oxide film thereon. Specifically, the ~~aluminium~~ aluminum sheet web was passed through an aqueous electrolytic solution of 20 % sulfuric acid at 35°C and electrolyzed therein with a direct current of 14 A/cm² being applied to the solution from an indirect electric cell. By this anodic oxidation, the ~~aluminium~~ aluminum sheet web had an oxide film of 2.5 g/m² formed thereon.

Please replace the paragraph beginning on page 65, line 17, with the following:

a16
Next, this was treated with a silicate. This treatment is for ensuring hydrophilicity of the non-image area of the printing plate having the ~~aluminium~~ aluminum sheet as the support. Specifically, the ~~aluminium~~ aluminum sheet web was passed through an aqueous 1.5 % sodium silicate (#3) solution at 70°C. Contact time was 15 seconds. Then, the web was washed with water. The amount of Si deposited on the web was 10 mg/m². The center line average height, Ra, of the thus-processed ~~aluminium~~ aluminum sheet was 0.25

Q16 mm. The ~~aluminium~~ aluminum sheet served as the support of the printing plate that was produced.

Please replace the paragraph beginning on Page 66, line 2, with the following:

Q17 Next, the ~~aluminium~~ aluminum support was coated with a subbing solution (composition shown below) by use of a wire bar, and dried with a hot air drier at 90°C for 30 seconds. After drying, the thickness of the subbing layer formed was 10 mg/m².

Please replace the paragraph beginning on Page 66, line 13, with the following:

Q18 Next, a photosensitive layer solution [P] (composition shown below) was prepared. Immediately after preparation, the solution [P] was applied to the subbing layer-coated ~~aluminium~~ aluminum sheet by use of a wire bar, and then dried with a hot air drier at 115°C for 45 seconds. In this manner, plates [P-1] to [P-6] to be processed into negative lithographic printing plates were produced. After drying, the amount of the photosensitive layer formed on each plate was 1.3 g/m². IR absorbers and onium salts used in the photosensitive solution [P] are shown in Table 1. The reflection density at an absorption peak in the IR range of the photosensitive layer of each plate was measured. For all plates, the reflection density fell between 0.6 and 1.2.

Please replace the paragraph beginning on Page 68, line 3, with the following:

Q19 The negative lithographic printing plates [P-1] to [P-6] were imagewise exposed to IR radiation, using TRENDSETTER 3244VFS, ~~manufactured~~ manufactured by Creo, with a

Q19 water-cooled 40 W IR semiconductor laser mounted therein. Output power was 9 W; drum speed was 210 rpm; energy at the plate was 100 mJ/cm²; and image resolution was 2400 dpi.

Please replace the paragraph on page 68, line 9, with the following:

After having been thus exposed, the plates were processed by use of an automatic processor, STABLON 900 N, ~~manufactured~~ manufactured by Fuji Photo Film Co., Ltd.

Q20 For both an original developer and a replenisher, DN-3C, ~~manufactured~~ manufactured by Fuji Photo Film Co., Ltd., was used, diluted 1/1 with water. The temperature of a developer bath was 30°C. For a finisher, FN-6, ~~manufactured~~ manufactured by Fuji Photo Film Co., Ltd., was used, diluted 1/1 with water (pH = 10.8).

Please replace the paragraph beginning on Page 69, line 13, with the following:

Q21 A photosensitive solution [P] was prepared in the same manner as in Examples 1 and 5, except that the amount of the allyl methacrylate/methacrylic acid copolymer (80/20 by mol) was 1.00 g and not 0.80 g, and the reducing additive was not used. The coating solution thus prepared was applied to the ~~aluminium~~ aluminum sheet supports, and dried. The Comparative Example lithographic printing plates thus produced herein are referred to as [Q-1] and [Q-2]. Details of the onium salts used therein are shown in Table 1.

Please replace the paragraph beginning on Page 70, line 14, with the following:

Q22 An ~~aluminium~~ aluminum support was formed in the same manner as in Examples 1 to 6, except that the support was not subjected to the silicate treatment for hydrophilicity.

Please replace the paragraph bridging Pages 70 and 71, with the following:

Q23 Next, the ~~aluminium~~ aluminum support was coated with a subbing solution (composition shown below) by use of a wire bar, and dried with a hot air drier at 90°C for 30 seconds. After drying, the thickness of the subbing layer formed was 10 mg/m².

Please replace the paragraph beginning on Page 71, line 9, with the following:

Q24 A photosensitive layer solution [P] was prepared in the same manner as in Examples 1 to 6, except that an IR absorber, IR-B (structure shown below) was used rather than IR-A, and onium salts and reducing additives shown in Table 3 below were used. Also in the same manner as in Examples 1 to 6, the coating solution thus prepared was applied to the subbing layer-coated ~~aluminium~~ aluminum sheet by use of a wire bar, and then dried. In this manner, plates [P-7] to [P-12] to be processed into negative lithographic printing plates were produced.